

approached them. Science is the diagnosis of essential—as opposed to accidental—properties.

But science has come very slowly into the reasoning processes of mankind.

Reason differs radically from directive instinct in that it is helpless without experience and memory, and may be misled by them. The

action of directive instinct may be compared to a machine that is devised to execute a particular

movement upon the playing of a particular chord

of music. Reason resolves the chord into its

component notes, which, by inferences from

experience and memory, are brought into connection with opinion or behaviour. The

experience may be direct, or indirect—that is to say,

may have been derived from the sensory impression

of an object or from information acquired

from others by means of gestures or words. A new-born

baby is helpless, since it lacks all but the

rudiments of directive instinct and also lacks

experience and memory.

Reason is popularly supposed to be man's

prerogative, and even evolutionist speculation

is sometimes coloured by the assumption that

this capacity is a development peculiar to human-

ity. But if the doctrine of evolution is reliable

the germs of reason *must* be inherent in all crea-

tures, and an unprejudiced survey of the be-

haviour of the lower animals will find no lack

evidence of some capacity for reasoning. Insects

which will pursue the routine of nest-

making
and egg-laying in complete disregard of
accidents
that render their labour useless and
absurd. will
use careful discrimination in the
preliminary tasks
of choosing a site for the nest and in
selecting its
materials. showing a judgment that
seems to
indicate that they can compare the
merits of
different sites and substances, and
can draw